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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,765	08/04/2003	Marie-Claire Cyrille	HSJ920030027US1 (HITG.025)	5113
51298	7590	07/27/2005	EXAMINER	
CRAWFORD MAUNU PLLC 1270 NORTHLAND DRIVE SUITE 390 ST. PAUL, MN 55120			CULBERT, ROBERTS P	
			ART UNIT	PAPER NUMBER
			1763	

DATE MAILED: 07/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/633,765

Applicant(s)

CYRILLE ET AL.

Examiner

Roberts Culbert

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5/19/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/4/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I (1-12) in the reply filed on 5/19/05 is acknowledged. Claim 13 is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent

Application Publication 2004/0027730 to Lille.

Regarding Claim 1, Lille teaches a method of forming leads comprising forming a liftoff mask having desired width; forming leads (1502, 1504) contiguous to and on opposite sides of the mask (See Figure 17); removing the liftoff mask, the removal of the liftoff mask leaving fencing on the leads (a fencing or surrounding region is inherently formed by material removal in the liftoff process); and performing chemical mechanical polishing on the leads to remove the fencing. (See Paragraphs 53 and 58)

Regarding Claim 6, Lille teaches forming a magnetoresistive sensor element (1310) and forming leads (1502, 1504) to the magnetoresistive element via lead overlays (1302, 1304)

Regarding Claims 2 and 7, the liftoff mask width is a track width for the magnetoresistive sensor.

Regarding Claims 3 and 8, the liftoff mask is a single layer.

Regarding Claims 4 and 9, Lille teaches removing remaining carbon with oxygen plasma (Paragraph 54)

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Regarding Claims 5 and 10, Lille does not explicitly teach depositing the lead layers using a sputtering process. However Official Notice is taken that forming lead layers by sputtering is old and well known in the art of forming a magnetic read head. It would have been obvious to one of ordinary skill in the art at the time of invention to use sputtering to form the lead layers by a suitable deposition technique.

Regarding Claim 12, Lille teaches forming a GMR sensor element. (Paragraph 38)

Regarding Claim 11, Lille teaches the method of the invention substantially as claimed, but does not explicitly teach using an AMR sensor element. However, Lille teaches TMR and GMR type magnetic sensor types and further, since the improvements of Lille do not depend on the sensor type, it would have been obvious to one of ordinary skill in the art at the time of invention to substitute any one of the well-known magnetic sensor types. Advantages of the various sensor types are old and well known in the magnetic sensor art.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-35 of copending Application No. 10/949,433. Although the conflicting claims are not identical, they are not patentably distinct from each other because they recite the same essential limitations using differing structure and wording. For example, the positioning and removing of a stencil recited in claim 11 of the conflicting patent reads on the liftoff mask of Claim 1. The step of chemical polishing is generally recited in the polishing step of claim 11 of the conflicting patent chemical mechanical polishing being an obvious expedient to one of ordinary skill in the

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art. The step of forming the carbon layer is recited in Claims 19 and 20 of the conflicting patent. Forming leads is generally recited in Claims 29-34. The portions of Claims 11-28 corresponding to the known parts of a magnetic read head such as lead layers would be known to one of ordinary skill in the art. Dependent Claims are similarly recited. Although Claims 4 and 9 recite removing carbon with oxygen plasma, Claims 18-20 of the Conflicting Patent recite plasma processing and oxygen plasma is a well-known expedient in the art as shown by Lille (cited above)

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 6,669,983 to Kagami et al. teaches a method of forming a magnetoresistive read head comprising removing fencing using CMP after performing a lift off process. U.S. Patent Application Publication 2002/0007550 to Shoji teaches forming a magnetoresistive read element comprising performing a single lift-off process.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberts Culbert whose telephone number is (571) 272-1433. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Parviz Hassanzadeh can be reached on (571) 272-1435. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. Culbert




PARVIZ HASSANZADEH
SUPERVISORY PATENT EXAMINER